

Release notes for ENDF/B Development n-097_Bk_250
evaluation



April 26, 2017

- **fizcon** Warnings:

1. It is OK for uncertainty to be bigger than value
MAT=9755, MF= 1, MT=458 (1): Big unc

```
ERROR(S) FOUND IN MAT=9755, MF= 1, MT=458
    ERROR GREATER THAN VALUE AT COMPONENT # 51           SEQUENCE NUMBER      11
    ERROR GREATER THAN VALUE AT COMPONENT # 53           SEQUENCE NUMBER      11
```

- **fudge-4.0** Warnings:

1. Cross section does not match sum of linked reaction cross sections
crossSectionSum label 0: total (Error # 0): CS Sum.

```
WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 0.35%
```

2. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 1 (n[multiplicity:'energyDependent', emissionMode:'prompt'] + n[emissionMode:'6 delayed'] + gamma [total fission] [nubar]): / Form 'eval': (Error # 0): Condition num.

```
WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small
```

3. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 2 (n[multiplicity:'energyDependent', emissionMode:'prompt'] + n[emissionMode:'6 delayed'] + gamma [total fission] [nubar]): / Form 'eval': (Error # 0): Condition num.

```
WARNING: Ratio of smallest/largest eigenvalue (3.863707e-09) is too small
```

4. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 3 (total): / Form 'eval': / Component 0 (Error # 0): Condition num.

```
WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small
```

5. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 3 (total): / Form 'eval': / Component 1 (Error # 0): Condition num.

```
WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small
```

6. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 4 (n + Bk250): / Form 'eval': / Component 0 (Error # 0): Condition num.

```
WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small
```

7. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 4 (n + Bk250): / Form 'eval': / Component 1 (Error # 0): Condition num.

```
WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small
```

8. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 8 (n[multiplicity:'energyDependent', emissionMode:'prompt'] + n[emissionMode:'6 delayed'] + gamma [total fission]): / Form 'eval': / Component 0 (Error # 0): Condition num.
- WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small
9. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 8 (n[multiplicity:'energyDependent', emissionMode:'prompt'] + n[emissionMode:'6 delayed'] + gamma [total fission]): / Form 'eval': / Component 1 (Error # 0): Condition num.
- WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small
10. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 10 (n + (Bk250_e1 ->Bk250 + gamma)): / Form 'eval': (Error # 0): Condition num.
- WARNING: Ratio of smallest/largest eigenvalue (3.265562e-10) is too small
11. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 11 (n + (Bk250_e2 ->Bk250 + gamma)): / Form 'eval': (Error # 0): Condition num.
- WARNING: Ratio of smallest/largest eigenvalue (9.560603e-10) is too small
12. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 12 (n + (Bk250_e3 ->Bk250 + gamma)): / Form 'eval': (Error # 0): Condition num.
- WARNING: Ratio of smallest/largest eigenvalue (1.937450e-10) is too small
13. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 13 (n + (Bk250_e4 ->Bk250 + gamma)): / Form 'eval': (Error # 0): Condition num.
- WARNING: Ratio of smallest/largest eigenvalue (6.124145e-09) is too small
14. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 14 (n + (Bk250_e5 ->Bk250 + gamma)): / Form 'eval': (Error # 0): Condition num.
- WARNING: Ratio of smallest/largest eigenvalue (1.544701e-10) is too small
15. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 15 (n + (Bk250_e6 ->Bk250 + gamma)): / Form 'eval': (Error # 0): Condition num.

```
WARNING: Ratio of smallest/largest eigenvalue (1.478017e-09) is too small
```

16. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 16 (n + (Bk250_e7 ->Bk250 + gamma)): / Form 'eval': (Error # 0): Condition num.

```
WARNING: Ratio of smallest/largest eigenvalue (3.522614e-10) is too small
```

17. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 17 (n + (Bk250_e8 ->Bk250 + gamma)): / Form 'eval': (Error # 0): Condition num.

```
WARNING: Ratio of smallest/largest eigenvalue (1.939477e-10) is too small
```

18. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 18 (n + (Bk250_e9 ->Bk250 + gamma)): / Form 'eval': (Error # 0): Condition num.

```
WARNING: Ratio of smallest/largest eigenvalue (1.135477e-09) is too small
```

19. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 19 (n + (Bk250_e10 ->Bk250 + gamma)): / Form 'eval': (Error # 0): Condition num.

```
WARNING: Ratio of smallest/largest eigenvalue (7.684865e-10) is too small
```

20. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 21 (n + (Bk250_e12 ->Bk250 + gamma)): / Form 'eval': (Error # 0): Condition num.

```
WARNING: Ratio of smallest/largest eigenvalue (3.786207e-10) is too small
```

21. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 22 (n + (Bk250_e13 ->Bk250 + gamma)): / Form 'eval': (Error # 0): Condition num.

```
WARNING: Ratio of smallest/largest eigenvalue (7.993098e-10) is too small
```

22. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 23 (n + (Bk250_e14 ->Bk250 + gamma)): / Form 'eval': (Error # 0): Condition num.

```
WARNING: Ratio of smallest/largest eigenvalue (4.457538e-10) is too small
```

23. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 24 (n + (Bk250_e15 ->Bk250 + gamma)): / Form 'eval': (Error # 0): Condition num.

```
WARNING: Ratio of smallest/largest eigenvalue (2.133883e-10) is too small
```

24. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 25 ($n + (Bk250_e16 \rightarrow Bk250 + \gamma)$): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (5.281043e-10) is too small

25. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 26 ($n + (Bk250_e17 \rightarrow Bk250 + \gamma)$): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (2.560443e-10) is too small

26. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 27 ($n + (Bk250_e18 \rightarrow Bk250 + \gamma)$): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (3.470588e-10) is too small

27. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 28 ($n + (Bk250_e19 \rightarrow Bk250 + \gamma)$): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (3.589503e-11) is too small

28. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 29 ($n + (Bk250_e20 \rightarrow Bk250 + \gamma)$): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (4.365337e-09) is too small

29. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 30 ($n + (Bk250_c \rightarrow Bk250 + \gamma)$): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

30. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 31 ($Bk251 + \gamma$): / Form 'eval': / Component 0 (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

31. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 31 ($Bk251 + \gamma$): / Form 'eval': / Component 1 (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

32. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 32 (n + Bk250 [angular distribution]): / Form 'eval': (Error # 1): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

33. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 33 (n[multiplicity:'energyDependent', emissionMode:'prompt'] + n[emissionMode:'6 delayed'] + gamma [total fission] [spectrum]): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

34. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 34 (n[multiplicity:'energyDependent', emissionMode:'prompt'] + n[emissionMode:'6 delayed'] + gamma [total fission] [spectrum]): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

35. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 35 (n[multiplicity:'energyDependent', emissionMode:'prompt'] + n[emissionMode:'6 delayed'] + gamma [total fission] [spectrum]): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

36. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 36 (n[multiplicity:'energyDependent', emissionMode:'prompt'] + n[emissionMode:'6 delayed'] + gamma [total fission] [spectrum]): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

- **fudge-4.0 Errors:**

1. ENDF format insists that all outgoing fission neutrons, delayed or otherwise, have spectra. For delayed neutrons this is tough.

Reading ENDF file: ../n-097_Bk_250.endf (Error # 0): No delayed n dist

WARNING: More than one delayed fission neutron decay time but no MF = 5 data

2. Duplicate Eout in outgoing distribution

Reading ENDF file: ../n-097_Bk_250.endf (Error # 1): Bad Eout

WARNING: skipping duplicate e_out = 5795070.0, i1 = 70 0 1e-05

3. Energy range of data set does not match cross section range

reaction label 21: n + (Bk250_c ->Bk250 + gamma) / Product: Bk250_c / Decay product: gamma_a / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (191770.0 -> 20000000.0) vs (102949.0 -> 20000000.0)

4. Energy range of data set does not match cross section range
reaction label 21: n + (Bk250_c ->Bk250 + gamma) / Product: Bk250_c / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (191770.0 -> 20000000.0) vs (102949.0 -> 20000000.0)

WARNING: Domain doesn't match the cross section domain: (137874.0 -> 20000000.0) vs (102949.0 -> 20000000.0)

WARNING: Domain doesn't match the cross section domain: (137874.0 -> 20000000.0) vs (102949.0 -> 20000000.0)

WARNING: Domain doesn't match the cross section domain: (300000.0 -> 20000000.0) vs (102949.0 -> 20000000.0)

... plus 19 more instances of this message

5. Energy range of data set does not match cross section range
reaction label 21: n + (Bk250_c ->Bk250 + gamma) / Product: Bk250_c / Decay product: gamma_b / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (137874.0 -> 20000000.0) vs (102949.0 -> 20000000.0)

6. Energy range of data set does not match cross section range
reaction label 21: n + (Bk250_c ->Bk250 + gamma) / Product: Bk250_c / Decay product: gamma_c / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (137874.0 -> 20000000.0) vs (102949.0 -> 20000000.0)

7. Energy range of data set does not match cross section range
reaction label 21: n + (Bk250_c ->Bk250 + gamma) / Product: Bk250_c / Decay product: gamma_d / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (300000.0 -> 20000000.0) vs (102949.0 -> 20000000.0)

8. Energy range of data set does not match cross section range
reaction label 21: n + (Bk250_c ->Bk250 + gamma) / Product: Bk250_c / Decay product: gamma_e / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (200000.0 -> 20000000.0) vs (102949.0 -> 20000000.0)

9. Energy range of data set does not match cross section range
reaction label 21: n + (Bk250_c ->Bk250 + gamma) / Product: Bk250_c / Decay product: gamma_f / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (300000.0 -> 20000000.0) vs (102949.0 -> 20000000.0)

10. Energy range of data set does not match cross section range
reaction label 21: n + (Bk250_c ->Bk250 + gamma) / Product: Bk250_c / Decay product: gamma_g / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (300000.0 -> 20000000.0) vs (102949.0 -> 20000000.0)

11. Energy range of data set does not match cross section range
reaction label 21: n + (Bk250_c ->Bk250 + gamma) / Product: Bk250_c / Decay product: gamma_h / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (180716.0 -> 20000000.0) vs (102949.0 -> 20000000.0)

12. Energy range of data set does not match cross section range
reaction label 21: n + (Bk250_c ->Bk250 + gamma) / Product: Bk250_c / Decay product: gamma_i / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (191770.0 -> 20000000.0) vs (102949.0 -> 20000000.0)

13. Energy range of data set does not match cross section range
reaction label 21: n + (Bk250_c ->Bk250 + gamma) / Product: Bk250_c / Decay product: gamma_j / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (250000.0 -> 20000000.0) vs (102949.0 -> 20000000.0)

14. Energy range of data set does not match cross section range
reaction label 21: n + (Bk250_c ->Bk250 + gamma) / Product: Bk250_c / Decay product: gamma_k / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (250000.0 -> 20000000.0) vs (102949.0 -> 20000000.0)

15. Energy range of data set does not match cross section range
reaction label 21: n + (Bk250_c ->Bk250 + gamma) / Product: Bk250_c / Decay product: gamma_l / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (250000.0 -> 20000000.0) vs (102949.0 -> 20000000.0)

16. Energy range of data set does not match cross section range
reaction label 21: n + (Bk250_c ->Bk250 + gamma) / Product: Bk250_c / Decay product: gamma_m / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (250000.0 -> 20000000.0) vs (102949.0 -> 20000000.0)

17. Energy range of data set does not match cross section range
reaction label 21: n + (Bk250_c ->Bk250 + gamma) / Product: Bk250_c / Decay product: gamma_n / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (250000.0 -> 20000000.0) vs (102949.0 -> 20000000.0)

18. Energy range of data set does not match cross section range
reaction label 21: n + (Bk250_c ->Bk250 + gamma) / Product: Bk250_c / Decay product: gamma_o / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (250000.0 -> 20000000.0) vs (102949.0 -> 20000000.0)

19. Energy range of data set does not match cross section range
reaction label 21: n + (Bk250_c ->Bk250 + gamma) / Product: Bk250_c / Decay product: gamma_p / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (250000.0 -> 20000000.0) vs (102949.0 -> 20000000.0)

20. Energy range of data set does not match cross section range
reaction label 21: n + (Bk250_c ->Bk250 + gamma) / Product: Bk250_c / Decay product: gamma_q / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (250000.0 -> 20000000.0) vs (102949.0 -> 20000000.0)

21. Energy range of data set does not match cross section range
reaction label 21: n + (Bk250_c ->Bk250 + gamma) / Product: Bk250_c / Decay product: gamma_r / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (300000.0 -> 20000000.0) vs (102949.0 -> 20000000.0)

22. Energy range of data set does not match cross section range
reaction label 21: n + (Bk250_c ->Bk250 + gamma) / Product: Bk250_c / Decay product: gamma_s / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (300000.0 -> 20000000.0) vs (102949.0 -> 20000000.0)

23. Energy range of data set does not match cross section range
reaction label 21: n + (Bk250_c ->Bk250 + gamma) / Product: Bk250_c / Decay product: gamma_t / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (300000.0 -> 20000000.0) vs (102949.0 -> 20000000.0)

24. Energy range of data set does not match cross section range
reaction label 21: n + (Bk250_c ->Bk250 + gamma) / Product: Bk250_c / Decay product: gamma_u / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (300000.0 -> 20000000.0) vs (102949.0 -> 20000000.0)

25. Energy range of data set does not match cross section range
reaction label 21: n + (Bk250_c ->Bk250 + gamma) / Product: Bk250_c / Decay product: gamma_v / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (300000.0 -> 20000000.0) vs (102949.0 -> 20000000.0)

26. Energy range of data set does not match cross section range
reaction label 21: n + (Bk250_c ->Bk250 + gamma) / Product: Bk250_c / Decay product: gamma_w / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (400000.0 -> 20000000.0) vs (102949.0 -> 20000000.0)

27. Calculated and tabulated Q values disagree.
reaction label 22: n[multiplicity:'2'] + Bk249 + gamma (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -4991889.006958008 eV vs -4969570. eV!

28. Energy range of data set does not match cross section range
reaction label 22: n[multiplicity:'2'] + Bk249 + gamma / Product: gamma_a / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (5500000.0 -> 20000000.0) vs (4989610.0 -> 20000000.0)

29. Energy range of data set does not match cross section range
reaction label 22: n[multiplicity:'2'] + Bk249 + gamma / Product: gamma_a / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (5500000.0 -> 20000000.0) vs (4989610.0 -> 20000000.0)

30. Energy range of data set does not match cross section range
reaction label 22: n[multiplicity:'2'] + Bk249 + gamma / Product: gamma_b / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (5500000.0 -> 20000000.0) vs (4989610.0 -> 20000000.0)

31. Energy range of data set does not match cross section range
reaction label 22: n[multiplicity:'2'] + Bk249 + gamma / Product: gamma_b / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (5500000.0 -> 20000000.0) vs (4989610.0 -> 20000000.0)

32. Energy range of data set does not match cross section range
reaction label 22: n[multiplicity:'2'] + Bk249 + gamma / Product: gamma_c / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (5500000.0 -> 20000000.0) vs (4989610.0 -> 20000000.0)

33. Energy range of data set does not match cross section range
reaction label 22: n[multiplicity:'2'] + Bk249 + gamma / Product: gamma_c / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (5500000.0 -> 20000000.0) vs (4989610.0 -> 20000000.0)

34. Energy range of data set does not match cross section range
reaction label 22: n[multiplicity:'2'] + Bk249 + gamma / Product: gamma_d / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (5500000.0 -> 20000000.0) vs (4989610.0 -> 20000000.0)

35. Energy range of data set does not match cross section range
reaction label 22: n[multiplicity:'2'] + Bk249 + gamma / Product: gamma_d / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (5500000.0 -> 20000000.0) vs (4989610.0 -> 20000000.0)

36. Energy range of data set does not match cross section range
reaction label 22: n[multiplicity:'2'] + Bk249 + gamma / Product: gamma_e / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (5500000.0 -> 20000000.0) vs (4989610.0 -> 20000000.0)

37. Energy range of data set does not match cross section range
reaction label 22: n[multiplicity:'2'] + Bk249 + gamma / Product: gamma_e / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (5500000.0 -> 20000000.0) vs (4989610.0 -> 20000000.0)

38. Energy range of data set does not match cross section range
reaction label 22: n[multiplicity:'2'] + Bk249 + gamma / Product: gamma_f / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (5500000.0 -> 20000000.0) vs (4989610.0 -> 20000000.0)

39. Energy range of data set does not match cross section range
reaction label 22: n[multiplicity:'2'] + Bk249 + gamma / Product: gamma_f / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)
- WARNING: Domain doesn't match the cross section domain: (5500000.0 -> 20000000.0) vs (4989610.0 -> 20000000.0)
40. Energy range of data set does not match cross section range
reaction label 22: n[multiplicity:'2'] + Bk249 + gamma / Product: gamma_g / Multiplicity: (Error # 0): Domain mismatch (a)
- WARNING: Domain doesn't match the cross section domain: (5500000.0 -> 20000000.0) vs (4989610.0 -> 20000000.0)
41. Energy range of data set does not match cross section range
reaction label 22: n[multiplicity:'2'] + Bk249 + gamma / Product: gamma_g / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)
- WARNING: Domain doesn't match the cross section domain: (5500000.0 -> 20000000.0) vs (4989610.0 -> 20000000.0)
42. Energy range of data set does not match cross section range
reaction label 22: n[multiplicity:'2'] + Bk249 + gamma / Product: gamma_h / Multiplicity: (Error # 0): Domain mismatch (a)
- WARNING: Domain doesn't match the cross section domain: (5500000.0 -> 20000000.0) vs (4989610.0 -> 20000000.0)
43. Energy range of data set does not match cross section range
reaction label 22: n[multiplicity:'2'] + Bk249 + gamma / Product: gamma_h / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)
- WARNING: Domain doesn't match the cross section domain: (5500000.0 -> 20000000.0) vs (4989610.0 -> 20000000.0)
44. Energy range of data set does not match cross section range
reaction label 22: n[multiplicity:'2'] + Bk249 + gamma / Product: gamma_i / Multiplicity: (Error # 0): Domain mismatch (a)
- WARNING: Domain doesn't match the cross section domain: (5500000.0 -> 20000000.0) vs (4989610.0 -> 20000000.0)
45. Energy range of data set does not match cross section range
reaction label 22: n[multiplicity:'2'] + Bk249 + gamma / Product: gamma_i / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)
- WARNING: Domain doesn't match the cross section domain: (5500000.0 -> 20000000.0) vs (4989610.0 -> 20000000.0)
46. Energy range of data set does not match cross section range
reaction label 22: n[multiplicity:'2'] + Bk249 + gamma / Product: gamma_j / Multiplicity: (Error # 0): Domain mismatch (a)
- WARNING: Domain doesn't match the cross section domain: (5500000.0 -> 20000000.0) vs (4989610.0 -> 20000000.0)
47. Energy range of data set does not match cross section range
reaction label 22: n[multiplicity:'2'] + Bk249 + gamma / Product: gamma_j / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)
- WARNING: Domain doesn't match the cross section domain: (5500000.0 -> 20000000.0) vs (4989610.0 -> 20000000.0)

48. Energy range of data set does not match cross section range
reaction label 22: n[multiplicity:'2'] + Bk249 + gamma / Product: gamma_k / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (5500000.0 -> 20000000.0) vs (4989610.0 -> 20000000.0)

49. Energy range of data set does not match cross section range
reaction label 22: n[multiplicity:'2'] + Bk249 + gamma / Product: gamma_k / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (5500000.0 -> 20000000.0) vs (4989610.0 -> 20000000.0)

50. Energy range of data set does not match cross section range
reaction label 22: n[multiplicity:'2'] + Bk249 + gamma / Product: gamma_l / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (5500000.0 -> 20000000.0) vs (4989610.0 -> 20000000.0)

51. Energy range of data set does not match cross section range
reaction label 22: n[multiplicity:'2'] + Bk249 + gamma / Product: gamma_l / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (5500000.0 -> 20000000.0) vs (4989610.0 -> 20000000.0)

52. Energy range of data set does not match cross section range
reaction label 22: n[multiplicity:'2'] + Bk249 + gamma / Product: gamma_m / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (5500000.0 -> 20000000.0) vs (4989610.0 -> 20000000.0)

53. Energy range of data set does not match cross section range
reaction label 22: n[multiplicity:'2'] + Bk249 + gamma / Product: gamma_m / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (5500000.0 -> 20000000.0) vs (4989610.0 -> 20000000.0)

54. Energy range of data set does not match cross section range
reaction label 22: n[multiplicity:'2'] + Bk249 + gamma / Product: gamma_n / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (5500000.0 -> 20000000.0) vs (4989610.0 -> 20000000.0)

55. Energy range of data set does not match cross section range
reaction label 22: n[multiplicity:'2'] + Bk249 + gamma / Product: gamma_n / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (5500000.0 -> 20000000.0) vs (4989610.0 -> 20000000.0)

56. Energy range of data set does not match cross section range
reaction label 22: n[multiplicity:'2'] + Bk249 + gamma / Product: gamma_o / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (5500000.0 -> 20000000.0) vs (4989610.0 -> 20000000.0)

57. Energy range of data set does not match cross section range
reaction label 22: n[multiplicity:'2'] + Bk249 + gamma / Product: gamma_o / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)
- WARNING: Domain doesn't match the cross section domain: (5500000.0 -> 20000000.0) vs (4989610.0 -> 20000000.0)
58. Energy range of data set does not match cross section range
reaction label 22: n[multiplicity:'2'] + Bk249 + gamma / Product: gamma_p / Multiplicity: (Error # 0): Domain mismatch (a)
- WARNING: Domain doesn't match the cross section domain: (5500000.0 -> 20000000.0) vs (4989610.0 -> 20000000.0)
59. Energy range of data set does not match cross section range
reaction label 22: n[multiplicity:'2'] + Bk249 + gamma / Product: gamma_p / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)
- WARNING: Domain doesn't match the cross section domain: (5500000.0 -> 20000000.0) vs (4989610.0 -> 20000000.0)
60. Energy range of data set does not match cross section range
reaction label 22: n[multiplicity:'2'] + Bk249 + gamma / Product: gamma_q / Multiplicity: (Error # 0): Domain mismatch (a)
- WARNING: Domain doesn't match the cross section domain: (5500000.0 -> 20000000.0) vs (4989610.0 -> 20000000.0)
61. Energy range of data set does not match cross section range
reaction label 22: n[multiplicity:'2'] + Bk249 + gamma / Product: gamma_q / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)
- WARNING: Domain doesn't match the cross section domain: (5500000.0 -> 20000000.0) vs (4989610.0 -> 20000000.0)
62. Energy range of data set does not match cross section range
reaction label 22: n[multiplicity:'2'] + Bk249 + gamma / Product: gamma_r / Multiplicity: (Error # 0): Domain mismatch (a)
- WARNING: Domain doesn't match the cross section domain: (5500000.0 -> 20000000.0) vs (4989610.0 -> 20000000.0)
63. Energy range of data set does not match cross section range
reaction label 22: n[multiplicity:'2'] + Bk249 + gamma / Product: gamma_r / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)
- WARNING: Domain doesn't match the cross section domain: (5500000.0 -> 20000000.0) vs (4989610.0 -> 20000000.0)
64. Calculated and tabulated Q values disagree.
reaction label 23: n[multiplicity:'3'] + Bk248 + gamma (Error # 0): Q mismatch
- WARNING: Calculated and tabulated Q-values disagree: -11292755.7555542 eV vs -1.12713e7 eV!
65. Energy range of data set does not match cross section range
reaction label 23: n[multiplicity:'3'] + Bk248 + gamma / Product: gamma_a / Multiplicity: (Error # 0): Domain mismatch (a)
- WARNING: Domain doesn't match the cross section domain: (12000000.0 -> 20000000.0) vs (11316700.0 -> 20000000.0)

66. Energy range of data set does not match cross section range
reaction label 23: n[multiplicity:'3'] + Bk248 + gamma / Product: gamma_a / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (12000000.0 -> 20000000.0) vs (11316700.0 -> 20000000.0)

67. Energy range of data set does not match cross section range
reaction label 23: n[multiplicity:'3'] + Bk248 + gamma / Product: gamma_b / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (12000000.0 -> 20000000.0) vs (11316700.0 -> 20000000.0)

68. Energy range of data set does not match cross section range
reaction label 23: n[multiplicity:'3'] + Bk248 + gamma / Product: gamma_b / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (12000000.0 -> 20000000.0) vs (11316700.0 -> 20000000.0)

69. Energy range of data set does not match cross section range
reaction label 23: n[multiplicity:'3'] + Bk248 + gamma / Product: gamma_c / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (12000000.0 -> 20000000.0) vs (11316700.0 -> 20000000.0)

70. Energy range of data set does not match cross section range
reaction label 23: n[multiplicity:'3'] + Bk248 + gamma / Product: gamma_c / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (12000000.0 -> 20000000.0) vs (11316700.0 -> 20000000.0)

71. Energy range of data set does not match cross section range
reaction label 23: n[multiplicity:'3'] + Bk248 + gamma / Product: gamma_d / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (12000000.0 -> 20000000.0) vs (11316700.0 -> 20000000.0)

72. Energy range of data set does not match cross section range
reaction label 23: n[multiplicity:'3'] + Bk248 + gamma / Product: gamma_d / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (12000000.0 -> 20000000.0) vs (11316700.0 -> 20000000.0)

73. Energy range of data set does not match cross section range
reaction label 23: n[multiplicity:'3'] + Bk248 + gamma / Product: gamma_e / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (12000000.0 -> 20000000.0) vs (11316700.0 -> 20000000.0)

74. Energy range of data set does not match cross section range
reaction label 23: n[multiplicity:'3'] + Bk248 + gamma / Product: gamma_e / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (12000000.0 -> 20000000.0) vs (11316700.0 -> 20000000.0)

75. Energy range of data set does not match cross section range
reaction label 23: n[multiplicity:'3'] + Bk248 + gamma / Product: gamma_f / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (12000000.0 -> 20000000.0) vs (11316700.0 -> 20000000.0)

76. Energy range of data set does not match cross section range
reaction label 23: n[multiplicity:'3'] + Bk248 + gamma / Product: gamma_f / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (12000000.0 -> 20000000.0) vs (11316700.0 -> 20000000.0)

77. Energy range of data set does not match cross section range
reaction label 23: n[multiplicity:'3'] + Bk248 + gamma / Product: gamma_g / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (12000000.0 -> 20000000.0) vs (11316700.0 -> 20000000.0)

78. Energy range of data set does not match cross section range
reaction label 23: n[multiplicity:'3'] + Bk248 + gamma / Product: gamma_g / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (12000000.0 -> 20000000.0) vs (11316700.0 -> 20000000.0)

79. Energy range of data set does not match cross section range
reaction label 23: n[multiplicity:'3'] + Bk248 + gamma / Product: gamma_h / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (12000000.0 -> 20000000.0) vs (11316700.0 -> 20000000.0)

80. Energy range of data set does not match cross section range
reaction label 23: n[multiplicity:'3'] + Bk248 + gamma / Product: gamma_h / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (12000000.0 -> 20000000.0) vs (11316700.0 -> 20000000.0)

81. Energy range of data set does not match cross section range
reaction label 23: n[multiplicity:'3'] + Bk248 + gamma / Product: gamma_i / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (12000000.0 -> 20000000.0) vs (11316700.0 -> 20000000.0)

82. Energy range of data set does not match cross section range
reaction label 23: n[multiplicity:'3'] + Bk248 + gamma / Product: gamma_i / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (12000000.0 -> 20000000.0) vs (11316700.0 -> 20000000.0)

83. Calculated and tabulated Q values disagree.
reaction label 24: n[multiplicity:'4'] + Bk247 + gamma (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -16775525.74798584 eV vs -1.67532e7 eV!

84. Energy range of data set does not match cross section range
reaction label 24: n[multiplicity:'4'] + Bk247 + gamma / Product: gamma_a / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (17500000.0 -> 20000000.0) vs (16820800.0 -> 20000000.0)

85. Energy range of data set does not match cross section range
reaction label 24: n[multiplicity:'4'] + Bk247 + gamma / Product: gamma_b / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (17500000.0 -> 20000000.0) vs (16820800.0 -> 20000000.0)

86. Energy range of data set does not match cross section range
reaction label 24: n[multiplicity:'4'] + Bk247 + gamma / Product: gamma_b / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (17500000.0 -> 20000000.0) vs (16820800.0 -> 20000000.0)

87. Energy range of data set does not match cross section range
reaction label 24: n[multiplicity:'4'] + Bk247 + gamma / Product: gamma_c / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (17500000.0 -> 20000000.0) vs (16820800.0 -> 20000000.0)

88. Energy range of data set does not match cross section range
reaction label 24: n[multiplicity:'4'] + Bk247 + gamma / Product: gamma_d / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (17500000.0 -> 20000000.0) vs (16820800.0 -> 20000000.0)

89. Energy range of data set does not match cross section range
reaction label 24: n[multiplicity:'4'] + Bk247 + gamma / Product: gamma_d / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (17500000.0 -> 20000000.0) vs (16820800.0 -> 20000000.0)

90. Energy range of data set does not match cross section range
reaction label 24: n[multiplicity:'4'] + Bk247 + gamma / Product: gamma_e / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (17500000.0 -> 20000000.0) vs (16820800.0 -> 20000000.0)

91. Energy range of data set does not match cross section range
reaction label 24: n[multiplicity:'4'] + Bk247 + gamma / Product: gamma_e / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (17500000.0 -> 20000000.0) vs (16820800.0 -> 20000000.0)

92. Energy range of data set does not match cross section range
reaction label 24: n[multiplicity:'4'] + Bk247 + gamma / Product: gamma_f / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (17500000.0 -> 20000000.0) vs (16820800.0 -> 20000000.0)

93. Energy range of data set does not match cross section range
reaction label 24: n[multiplicity:'4'] + Bk247 + gamma / Product: gamma_f / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (17500000.0 -> 20000000.0) vs (16820800.0 -> 20000000.0)

94. Energy range of data set does not match cross section range
reaction label 24: n[multiplicity:'4'] + Bk247 + gamma / Product: gamma_g / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (17500000.0 -> 20000000.0) vs (16820800.0 -> 20000000.0)

95. Energy range of data set does not match cross section range
reaction label 24: n[multiplicity:'4'] + Bk247 + gamma / Product: gamma_g / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (17500000.0 -> 20000000.0) vs (16820800.0 -> 20000000.0)

96. Energy range of data set does not match cross section range
reaction label 24: n[multiplicity:'4'] + Bk247 + gamma / Product: gamma_h / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (17500000.0 -> 20000000.0) vs (16820800.0 -> 20000000.0)

97. Energy range of data set does not match cross section range
reaction label 24: n[multiplicity:'4'] + Bk247 + gamma / Product: gamma_h / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (17500000.0 -> 20000000.0) vs (16820800.0 -> 20000000.0)

98. Energy range of data set does not match cross section range
reaction label 24: n[multiplicity:'4'] + Bk247 + gamma / Product: gamma_i / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (17500000.0 -> 20000000.0) vs (16820800.0 -> 20000000.0)

99. Energy range of data set does not match cross section range
reaction label 24: n[multiplicity:'4'] + Bk247 + gamma / Product: gamma_i / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (17500000.0 -> 20000000.0) vs (16820800.0 -> 20000000.0)

100. Calculated and tabulated Q values disagree.
reaction label 26: Bk251 + gamma (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: 5772750.999267578 eV vs 5795070. eV!

101. Multiplicity does not match sum of linked product multiplicities!
multiplicitySum label 23: n + (Bk250_c ->Bk250 + gamma) total gamma multiplicity (Error # 0): summedMultiplicityMismatch

WARNING: Multiplicity does not match sum of linked product multiplicities! Max diff: 4.86%

102. Multiplicity does not match sum of linked product multiplicities!
 $multiplicitySum$ label 24: $n[multiplicity:'2'] + Bk249 + \text{gamma total gamma multiplicity}$
 (Error # 0): *summedMultiplicityMismatch*
- WARNING: Multiplicity does not match sum of linked product multiplicities! Max diff: 56.24%
103. Multiplicity does not match sum of linked product multiplicities!
 $multiplicitySum$ label 25: $n[multiplicity:'3'] + Bk248 + \text{gamma total gamma multiplicity}$
 (Error # 0): *summedMultiplicityMismatch*
- WARNING: Multiplicity does not match sum of linked product multiplicities! Max diff: 91.47%
104. Multiplicity does not match sum of linked product multiplicities!
 $multiplicitySum$ label 26: $n[multiplicity:'4'] + Bk247 + \text{gamma total gamma multiplicity}$
 (Error # 0): *summedMultiplicityMismatch*
- WARNING: Multiplicity does not match sum of linked product multiplicities! Max diff: 100.00%
105. Calculated and tabulated Q values disagree.
 $fissionComponent$ label 0: $/reactionSuite/fissionComponents/fissionComponent[@label='0']$
 (Error # 0): *Q mismatch*
- WARNING: Calculated and tabulated Q-values disagree: 233886006164.414 eV vs 2.155532e8 eV!
106. Calculated and tabulated Q values disagree.
 $fissionComponent$ label 1: $/reactionSuite/fissionComponents/fissionComponent[@label='1']$
 (Error # 0): *Q mismatch*
- WARNING: Calculated and tabulated Q-values disagree: 233886006164.414 eV vs 2.155532e8 eV!
107. Calculated and tabulated Q values disagree.
 $fissionComponent$ label 2: $/reactionSuite/fissionComponents/fissionComponent[@label='2']$
 (Error # 0): *Q mismatch*
- WARNING: Calculated and tabulated Q-values disagree: 233886006164.414 eV vs 2.155532e8 eV!
108. Calculated and tabulated Q values disagree.
 $fissionComponent$ label 3: $/reactionSuite/fissionComponents/fissionComponent[@label='3']$
 (Error # 0): *Q mismatch*
- WARNING: Calculated and tabulated Q-values disagree: 233886006164.414 eV vs 2.155532e8 eV!
109. A covariance matrix was not positive semi-definite, so it has negative eigenvalues.
 $Section 32 (n + Bk250 [angular distribution]): / Form 'eval': / LegendreLValue L=1 vs 1$
 (Error # 0): *Bad evs*
- WARNING: 10 negative eigenvalues! Worst case = -5.085643e-04

- njoy2012 Warnings:

- Evaluation has no resonance parameters given
unresr...calculation of unresolved resonance cross sections (0): No RR

```
---message from unresr---mat 9755 has no resonance parameters
copy as is to nout
```

2. In some evaluations, the partial fission reactions MT=19, 20, 21, and 38 are given in File 3, but no corresponding distributions are given. In these cases, it is assumed that MT=18 should be used for the fission neutron distributions.
heatr...prompt kerma (0): HEATR/hinit (3)

```
---message from hinit---mt19 has no spectrum
          mt18 spectrum will be used.
```

3. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (1): HEATR/hinit (4)

```
---message from hinit---mf6, mt 16 does not give recoil za= 97249
          one-particle recoil approx. used.
```

4. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (2): HEATR/hinit (4)

```
---message from hinit---mf6, mt 17 does not give recoil za= 97248
          one-particle recoil approx. used.
```

5. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (3): HEATR/hinit (4)

```
---message from hinit---mf6, mt 37 does not give recoil za= 97247
          one-particle recoil approx. used.
```

6. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (4): HEATR/hinit (4)

```
---message from hinit---mf6, mt 51 does not give recoil za= 97250
          one-particle recoil approx. used.
```

7. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (5): HEATR/hinit (4)

```
---message from hinit---mf6, mt 52 does not give recoil za= 97250
          one-particle recoil approx. used.
```

8. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (6): HEATR/hinit (4)

```
---message from hinit---mf6, mt 53 does not give recoil za= 97250
          one-particle recoil approx. used.
```

9. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (7): HEATR/hinit (4)

```
---message from hinit---mf6, mt 54 does not give recoil za= 97250
          one-particle recoil approx. used.
```

10. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (8): HEATR/hinit (4)

```
---message from hinit---mf6, mt 55 does not give recoil za= 97250
          one-particle recoil approx. used.
```

11. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (9): HEATR/hinit (4)

```
---message from hinit---mf6, mt 56 does not give recoil za= 97250
one-particle recoil approx. used.
```

12. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (10): HEATR/hinit (4)

```
---message from hinit---mf6, mt 57 does not give recoil za= 97250
one-particle recoil approx. used.
```

13. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (11): HEATR/hinit (4)

```
---message from hinit---mf6, mt 58 does not give recoil za= 97250
one-particle recoil approx. used.
```

14. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (12): HEATR/hinit (4)

```
---message from hinit---mf6, mt 59 does not give recoil za= 97250
one-particle recoil approx. used.
```

15. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (13): HEATR/hinit (4)

```
---message from hinit---mf6, mt 60 does not give recoil za= 97250
one-particle recoil approx. used.
```

16. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (14): HEATR/hinit (4)

```
---message from hinit---mf6, mt 61 does not give recoil za= 97250
one-particle recoil approx. used.
```

17. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (15): HEATR/hinit (4)

```
---message from hinit---mf6, mt 62 does not give recoil za= 97250
one-particle recoil approx. used.
```

18. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (16): HEATR/hinit (4)

```
---message from hinit---mf6, mt 63 does not give recoil za= 97250
one-particle recoil approx. used.
```

19. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (17): HEATR/hinit (4)

```
---message from hinit---mf6, mt 64 does not give recoil za= 97250
one-particle recoil approx. used.
```

20. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (18): HEATR/hinit (4)

```
---message from hinit---mf6, mt 65 does not give recoil za= 97250
one-particle recoil approx. used.
```

21. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (19): HEATR/hinit (4)

```
---message from hinit---mf6, mt 66 does not give recoil za= 97250
one-particle recoil approx. used.
```

22. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (20): HEATR/hinit (4)

```
---message from hinit---mf6, mt 67 does not give recoil za= 97250
one-particle recoil approx. used.
```

23. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (21): HEATR/hinit (4)

```
---message from hinit---mf6, mt 68 does not give recoil za= 97250
one-particle recoil approx. used.
```

24. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (22): HEATR/hinit (4)

```
---message from hinit---mf6, mt 69 does not give recoil za= 97250
one-particle recoil approx. used.
```

25. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (23): HEATR/hinit (4)

```
---message from hinit---mf6, mt 70 does not give recoil za= 97250
one-particle recoil approx. used.
```

26. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (24): HEATR/hinit (4)

```
---message from hinit---mf6, mt 91 does not give recoil za= 97250
one-particle recoil approx. used.
```

27. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (25): HEATR/hinit (4)

```
---message from hinit---mf6, mt102 does not give recoil za= 97251
photon momentum recoil used.
```

28. There is a problem with the fission energy release.
heatr...prompt kerma (32): HEATR/nheat (3)

```
---message from nheat---changed q from 2.155532E+08 to 2.034142E+08
for mt 18
```

29. Evaluation has no resonance parameters given
purr...probabalistic unresolved calculation (0): No RR

```
---message from purr---mat 9755 has no resonance parameters
copy as is to nout
```

- **xsectplotter** Errors:

1. ENDF format insists that all outgoing fission neutrons, delayed or otherwise, have spectra. For delayed neutrons this is tough.
(Error # 2): No delayed n dist

```
WARNING: More than one delayed fission neutron decay time but no MF = 5 data
```

2. Duplicate Eout in outgoing distribution
(Error # 3): Bad Eout

```
WARNING: skipping duplicate e_out = 5795070.0, i1 = 70 0 1e-05
```